BEFORE THE DIVISION OF WATER RIGHTS

In The Matter Of: **Steve Pentz** **RESPONDENT**	**MEASURING DEVICE AND CONTROL STRUCTURE NOTICE** SEAA No. 2140 WATER RIGHTS: 35-8275, 35-444 DISTRIBUTION ACCOUNT: 103309

I. AUTHORITY

The Division of Water Rights ("Division") issues this Notice under UTAH CODE ANN. § 73-5-4, and in accordance with UTAH ADMIN. CODE R. 655-15.

U.C.A. § 73-5-4 states in part :

(1) To assist the state engineer or water commissioner in the regulation, distribution, and measurement of water, a person using water in this state, ... shall construct or install and maintain controlling works and a measuring device at:

(a) each location where water is diverted from a source; and

(b) any other location required by the state engineer.

(2) A person using water in this state shall make the controlling works and measuring device accessible to the state engineer or water commissioner.

(3) The state engineer shall approve the design of:

(a) the measuring device; and

(b) controlling works so that the state engineer or a water commissioner may regulate and lock the works. ...

(6) If a water user refuses or neglects to construct or install the controlling works or measuring device after 30 days' notice to do so by the state engineer, the state engineer may:

(a) forbid the use of water until the user complies with the state engineer's requirement; and

(b) commence enforcement proceedings authorized by Section 73-2-25.

II. STATEMENT OF FACTS

1. Respondent diverts surface water from Lost Creek located within the Weber River Distribution System operated under the direction of the Water Commissioner appointed by the Utah State Engineer.

2. Based on a preliminary review, Respondent is the primary owner (owns the largest portion) of Water Right Number 35-8275. As such, Respondent pays the annual distribution assessment associated with account 103309 for the regulation of the flow diverted under water right number 35-8275.

3. Many water users contract with Weber Basin Water Conservancy District to receive project storage water in addition to natural flow water. Storage water deliveries must also be properly measured and accounted.

4. Respondent diverts water into the Pentz Ditch. For map reference purposes, the Point of Diversion (POD) is located near 41.114 degrees latitude and -111.489 degrees longitude.

5. Respondent diverts water into the Crouch-Pentz Ditch. For map reference purposes, the POD of the Crouch-Pentz Ditch is located near 41.115 degrees Latitude and -111.489 degrees longitude.

6. Respondent diverts water at the Pentz Pump. For map reference purposes, the POD of the pump is located near 41.149 degrees Latitude and -111.446 degrees Longitude.

7. A suitable control structure does not exist at the head of the Pentz Ditch to control the flow into the ditch, as required.

8. A suitable control structure does not exist at the head of the Crouch-Pentz Ditch to control the flow into the ditch, as required.

9. There is not a water measuring device (such as a Parshall flume) on the Pentz Ditch, as required.

10. The Crouch-Pentz Ditch has a measuring device (Parshall flume) located about 200 feet downstream from the POD. It appears the flume is adequate if it is kept clean and a control gate is installed upstream.

11. There is not an approved water meter at the Pentz pump as required. Meters should display the cumulative total flow in ac-ft and realtime flow rate in cubic feet per second.

12. Respondent is responsible for maintaining operable control structures and suitable measuring devices on every ditch or diversion through which Respondent diverts Lost Creek water. Respondent is not obligated to maintain diversion structures and flumes at POD locations where Respondent doesn't divert or receive water.

III. ACTIONS REQUIRED

1. All creek diversions used by Respondent must have suitable control structures and measuring devices. The measuring devices must enable a flow record at all times. A stilling well is one method to meet this recording requirement. A stilling well, when properly constructed, enables a recording of the water level at the staff gage location at the flume, which translates into flow using the rating table. The Pentz Pump must have a water meter that is also compatible with future electronic telemetry communication.

2. The flume measuring devices must measure the quantity of water diverted and should be located upstream of all use to enable automated flow records and reporting in the future.

3. Headgate control structures should not leak excessively. They must have a gate stem wheel that can be locked with a chain lock when necessary to control the flow into the ditch.

4. **The above work must be completed on or before May 1, 2019.**

IV. ADDITIONAL AGENCY ACTION

1. The Respondent is encouraged to diligently attend to the work required by this Notice. If the work is satisfactorily completed in a timely manner, the Division will conclude this agency action.
2. If the work is not satisfactorily completed in a timely manner, the Division may issue an Order forbidding the use of water until the Respondent has complied, or may commence an enforcement action as allowed under Utah Code Ann. § 73-5-4 (6).
3. If an Order forbidding the use of water is issued and is violated by the Respondent, the Division may commence an enforcement action in accordance with Utah Code Ann. § 73-2-25.
4. If determined to be in violation an Order, Respondent may be subject to administrative penalties in accordance with Utah Code Ann. § 73-2-26, including fines not to exceed $5,000 per day for knowing violations or $1,000 per day for unknowing violations and replacement of up to 200% of water diverted without right. In addition, Respondent may be liable for expenses incurred by the Division in investigating and stopping the violation."

V. FURTHER INFORMATION

If Respondent has questions concerning this Notice, state laws and rules, or the required and recommended action, please discuss them with:

Michael Drake
Regional Engineer, Weber River Office
Utah Division of Water Rights
1594 W North Temple Ste 220
Salt Lake City, UT 84114-6300
(801) 538-7240

or

Ben Anderson
Distribution Engineer
Utah Division of Water Rights

1594 W North Temple Ste 220
Salt Lake City, UT 84114-6300
(801) 538-7240

Dated this 17th day of October, 2018

Ben Anderson, P.E.
Distribution Engineer
Utah Division of Water Rights

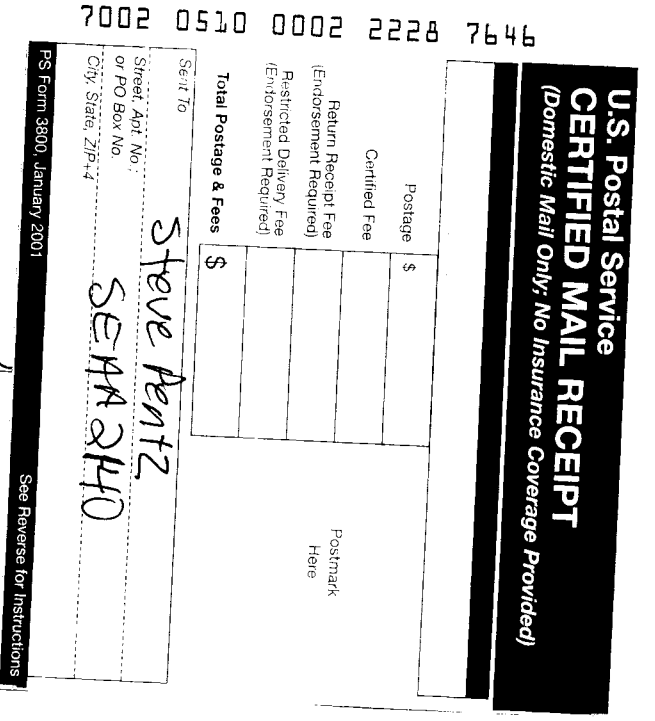
cc: Michael Drake, Regional Engineer
Cole Panter, Weber River Commissioner
Aaron Waldron, Deputy Commissioner

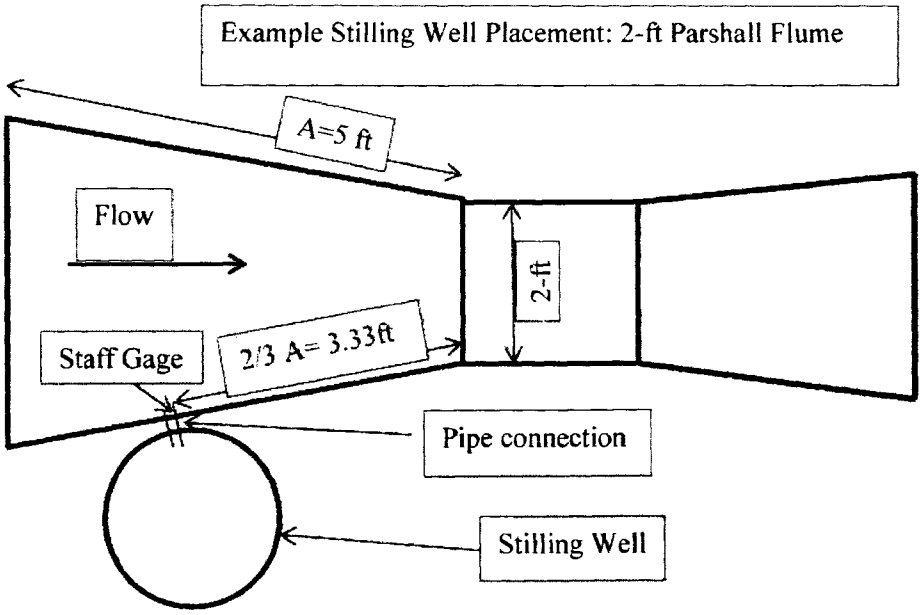
CERTIFICATE OF MAILING

I, the undersigned, certify that on this 17th day of October, 2018, I mailed a copy of the foregoing Notice by regular U.S. Mail, delivery confirmation receipt requested, to the following:

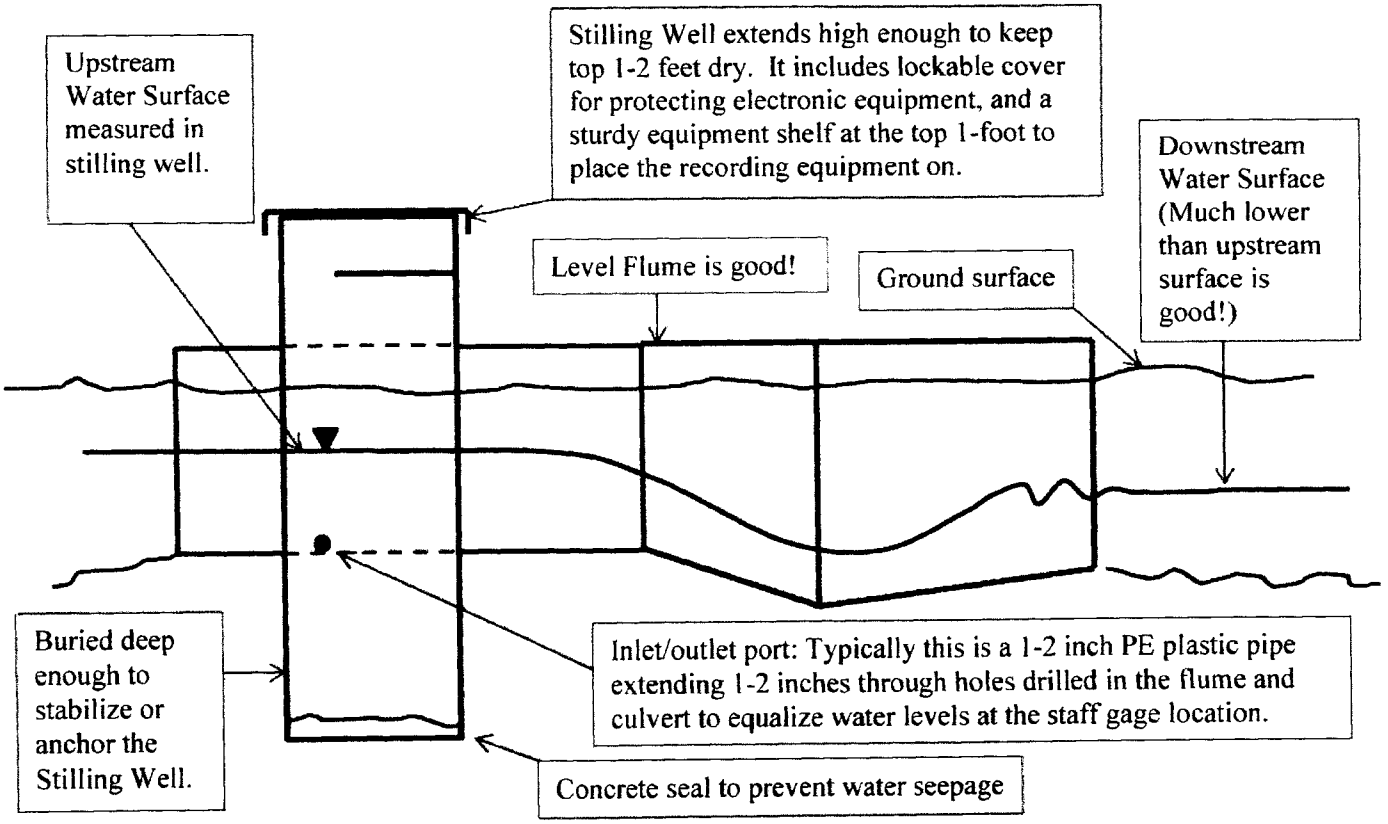
Steve Pentz
1885 North 6800 East
Croydon, UT 84018

Kelly Horne
Division of Water Rights
Field Services Secretary





Plan View (not to scale)



Elevation View (not to scale)

STILLING WELLS ON MEASURING DEVICES

Stilling Wells are wide short "wells" that "still" the water surface by removing waves, enabling an accurate water level to be recorded. They are a key part of measuring devices whenever a reliable flow record is needed. They hydraulically connect the water level in the Stilling Well to the water level in the measuring device using one or two small diameter pipes. When the measuring device and its Stilling Well are both working properly, a rating table or equation allows the user to obtain flow in cubic feet per second (cfs) based on a measured water level height in feet.

A Stilling Well is a vertical pipe or conduit extending vertically from below the lowest anticipated water level at the base or floor to 1-2 feet above the highest anticipated flood stage water level at the lid or top. Stilling Wells are usually constructed of steel, but are sometimes constructed of formed concrete as part of the flume or precast concrete pipe. Most Stilling Wells are constructed of galvanized corrugated metal pipe (culvert) with a locking steel lid or cap. Plastic pipe is not ideal due to its high thermal expansion in sunlight.

Properly-installed Stilling Wells must:

1. Be a minimum diameter of 18-inches to allow room for equipment. In some existing situations smaller diameters may work, but 24-inch diameter stilling wells are ideal.
2. Extend at least 1 foot below the low water level to measure zero flow and allow adequate space for some sediment accumulation.
3. Extend at least 2 feet above the highest anticipated water level to keep electronic equipment dry, and include a sturdy shelf for equipment in the top 1-foot of the stilling well. Stilling Well. The shelf should cover about ¾ of the area to leave space for equipment and cleaning access.
4. Be installed vertical. We typically often use a sensor that is a "float and counterweight" hanging from a wheel connected to an electronic recorder. If the stilling well leans, the float or weight bumps the sides, causing errors.
5. Be anchored. It can be buried into the ground far enough to prevent excess movement or it can be securely fastened to a stabile structure for stability, which is very important.
6. Be sealed if buried. The floor of the stilling well, if buried underground, must not allow water to seep out, creating a false low water level. Ready mix concrete may be poured in the stilling well (dry or mixed), which usually makes a good seal even if the surface is not smooth.
7. Be hydraulically connected to the measuring device. The locations of the connection(s) are important. The goal is to replicate a water level in the stilling well. If the water level drops lower than the connection, it cannot record the water level. The lower connection must be lower than the lowest measurable water level. These interconnections vary in size and material. In most situations, polyethylene flexible sprinkler pipe (1-2 inch) and a large drill bit work great. If the drill bit is larger than the pipe, seal the space with a waterproof sealant to prevent leakage.
8. Be strong. The strength (wall thickness) of the CMP or culvert is usually not a major design concern on most measuring devices. However, if the culvert wall thickness is too thin it may rust or corrode and need replacement. Selection of strength may determine the useful service life.